

NASA Vision
April 2003
Vol. 1, No. 1



The HQ Bulletin has a replacement . . .

the NASA Vision



With One NASA as our new mantra, the *HQ Bulletin (HQB)* has been redesigned and renamed, effectively creating a new publication, the *NASA Vision*. Like the *HQB*, *NASA Vision* will continue to highlight awards and events at Headquarters, but it will also include expanded coverage of all news throughout the Agency.

NASA Vision will have four standing columns: The Administrator's Corner, Around the Centers, Freedom to Manage (F2M) and employee profiles. The remaining sections of the publication will be dedicated to Agency news, achievements and images.

In This Issue:

Explorer School Program
2003 Hall of Fame Awards
F2M Task Force Update

Administrator's Corner

NASA's ability to fulfill its ambitious mission is dependent on the quality of its workforce. An agency is only as strong as its people. They need to be world-class if they are to be expected to break new ground in science and technology, explore the universe or pioneer exciting discoveries here on Earth and beyond.

In the wake of the Columbia tragedy, much has been written and discussed in the public debate about the prospect of future expertise at NASA. One of the greatest challenges before the Agency today is having the people — the human capital — available to forge ahead and make future breakthroughs tomorrow's everyday reality. History is made everyday at NASA, and none of those achievements happened by accident. They were the result of management innovation, revolutionary technologies and solid science and research.

One of the greatest challenges before the Agency today is having the people — the human capital — available to forge ahead and make future breakthroughs tomorrow's everyday reality.

NASA faces an increasing management challenge in attracting, hiring and retaining the talented men and women who, inspired by our amazing discoveries and innovations of the past four decades, will help mold the future of our nation's aeronautics and space programs. As a nation, we must ensure that the Agency continues to have the scientific and technical expertise necessary to preserve our role as the world's leader in aeronautics, space and Earth science, and emerging technology research.

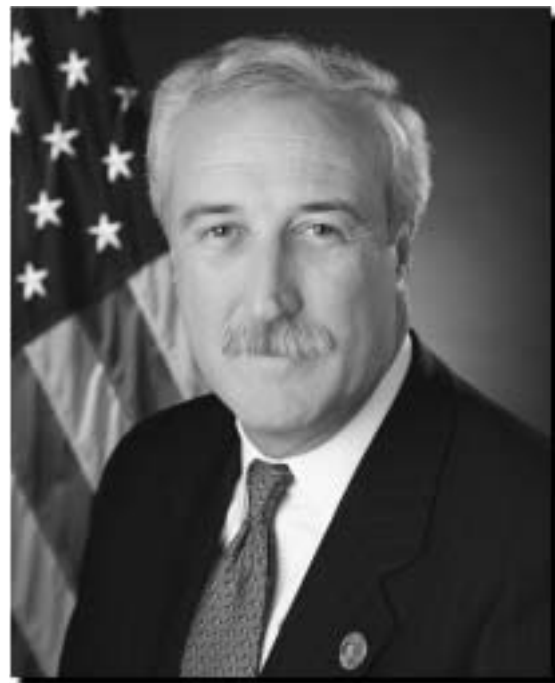


Photo credit: NASA/Bill Ingalls

The President already has indicated his commitment to the strategic management of human capital in the federal workforce, by making this imperative first on his Management Agenda. The President's recognition of the human capital challenges faced by NASA and other agencies is shared by the Government Accounting Office, which has placed the management of human capital as one of the items on the government-wide "high-risk list."

Several of our planned actions to deal with threats to our human capital are possible without the aid of Congress, but some of the solutions require legislation. Specifically, we need to: encourage students to pursue careers in science and technology; compete successfully with the private sector to attract and retain a world-class workforce; and reshape the workforce to address skill imbalances and gaps, and leverage outside expertise to address skill gaps and strengthen NASA's mission capability.

With the help of Congress, NASA scientists, engineers, researchers and technicians will continue to make remarkable discoveries and advancements that touch the lives of every American and "pioneering the future" as only NASA can.



NASA Announces Explorer Schools Program

NASA announced the NASA Explorer Schools (NES) Program as an innovative initiative to bring exciting learning opportunities to educators, students and their families.

The NES will provide a unique relationship between schools and the Agency to "inspire the next generation of explorers." The program is designed to provide customized, extended professional development for educators. It also will provide authentic mathematics and science experiences for students and their families.

Fifty NES teams will be chosen from around the country to begin the journey. The teams will have a week of intensive training at one of NASA's 10 Field Centers in July. Each team will consist of three or four science, mathematics or technology educators, and an

administrator. The teams will develop and implement action plans to address local needs in science, mathematics or technology education for the following three years. During the 2003 pilot year, the program will focus on 5th-and 8th-grade content.

Selected educator/administrator teams will work with NASA specialists to integrate Agency science content into their curriculum through problem-solving activities and to incorporate challenges into their mathematics and science curriculum. Students will have opportunities to apply science, mathematics and technology to real-world issues and problems, and to learn about the vast array of career options at NASA. Students and their families will be the focus of interactive local and online learning experiences.



All NASA Explorer School Teams will be eligible for a \$10,000 grant. The grant is designed to assist with the purchase of science and technology tools to support the teams' implementation plan to bring cutting-edge technology applications to the classroom.

To learn more about the NES Program and eligibility requirements, visit the NES Web site for information about the program:

explorerschools.nasa.gov

For more information about NASA and other programs, visit: www.nasa.gov

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VISION

NASA Vision 3



Around



The



Centers

***AMES*researchcenter**

NASA Ames Research Center has resumed its popular public tour program, providing an opportunity for the general public to join daily walking tours of some of NASA Ames' most interesting facilities. The two-hour tours, which are offered weekdays, begin with an overview of the Center's key technologies. Tour stops may include the NASA Advanced Supercomputing Facility, featuring some of the world's fastest supercomputers; the Crew Vehicle Systems Research Facility, which contains two full-size cockpit flight simulators; and the National Full-Scale Aerodynamics Complex, the world's largest wind tunnel.

***DRYDEN*flightresearchcenter**

Researchers at NASA Dryden, along with industry partners, are demonstrating the ability of an unmanned aerial vehicle (UAV) to detect, see and avoid various aircraft flying toward it on potential collision courses. Two categories of aircraft will serve as intruders on a collision course with the UAV during the demonstration. First, "cooperative" aircraft, or those transmitting their location, will be represented by NASA Dryden F-18s. Secondly, "non-cooperative" aircraft without location-transmitting devices are to be represented by aircraft including a hot air balloon and a sailplane. This test is part of a national effort to certify UAVs for integration into the national airspace, as the number and types of UAVs are expected to grow exponentially over the next decade.

***GLENN*researchcenter**

NASA Glenn Research Center recently welcomed Associate Administrator for Education Dr. Adena Williams Loston. On March 7, Dr. Loston, accompanied by Deputy Administrator for Technical Programs Dr. Clifford Houston and Educational Manager for Aerospace Technology Richard Andrews, toured several facilities, including the Mobile Aeronautics Educational Laboratory and the Aerospace Education Laboratory, and they participated in an education overview. The following day, more than 5,000 spectators and participants cheered on the 63 teams of high school students and their robots at the Buckeye Regional FIRST Robotics Competition held in the Cleveland State University Convocation Center.

***GODDARD*spaceflightcenter**

In the spirit of "Inspiring the next generation, as only NASA can," Goddard Space Flight Center sponsored several teams for the inaugural FIRST Chesapeake Regional Robotics competition, held March 13–15 at the historic United States Naval Academy. High school students were tasked with the challenge and excitement of designing and building an original robot in the FIRST (For Inspiration and Recognition of Science and Technology) robotics competition (www.usfirst.org). The finals are to be held April 10–12 in Houston, Texas. There were 55 teams of students and professional mentors at the Chesapeake Regional demonstrating their skill for science, mathematics and technology. Teams received awards and recognition for design excellence, competitive play, sportsmanship and high-impact partnerships between schools, businesses and communities. Goddard had a number of employees volunteer as judges, mentors and handlers, and provided funding for several local teams.

***KENNEDY*spacecenter**

Kennedy Space Center broke ground Feb. 25 on a new home for its shuttle processing team, the Operations Support Building II. The five-story, 189,000-square-foot complex will house more than 860 offices for NASA and contractor support staff involved directly in shuttle operations. The new facility will replace modular housing constructed more than 20 years ago, buildings that have outlived their initial design life by more than 12 years. The \$23 million structure is projected to be ready for workers in April 2005.

***JET*propulsionlaboratory**

Dr. James Breckinridge, Origins theme technologist at NASA Jet Propulsion Laboratory (JPL), has been named the recipient of the 2003 International Society for Optical Engineering's George W. Goddard Award, which is presented annually in recognition of outstanding innovative work and leadership in space optical instrumentation and systems. The American Institute of Aeronautics and Astronautics will honor JPL's Deep Space 1 Team with the institute's prestigious Space Systems Award. The team is being acknowledged for "outstanding performance of the team during the design, implementation, test, operations and extended mission, including space flight test of 12 important high-risk technologies."

***JOHNSON*spacecenter**

East Texas search and recovery workers came to NASA Johnson Space Center (JSC) recently for a VIP tour of the Center. The workers, who have come to East Texas from all over the country to aid in the search for debris from the STS-107 accident, visited the Mission Control Center, astronaut training mockups and the Space Center Houston visitors' center. Showing their Texas pride, JSC employees participated in this year's Houston Livestock Show and Rodeo, ranked as the world's largest rodeo. JSC also displayed an interactive exhibit at the rodeo for the sixth straight year.

***LANGLEY*researchcenter**

As part of NASA's mission to inspire the next generation of explorers, NASA Langley Research Center and the Arecibo Observatory in Puerto Rico will help students plan an out-of-this-world vacation — an imaginary trip through the solar system and beyond. The Case of the Galactic Vacation, scheduled to air May 14, was filmed in Puerto Rico. The cast of the NASA Science Files teams with fifth-grade students at the Antonio Gonzalez Suarez Bilingual School. This episode will feature Astronaut Franklin Chang-Diaz and the crew of Expedition Six who will help the students understand what it is like to live and work in space.

***MARSHALL*spaceflightcenter**

A new Marshall Space Flight Center history book *50 Years of Rockets and Spacecraft in the Rocket City* has just been released. The project was sponsored by the NASA Marshall Retirees Association. The book tells the story of the thousands of engineers, scientists, technicians and administrative personnel who contributed for five decades to the peaceful exploration of space. For more information, call Candy Kelley at 256.544.7565 or e-mail Candy.L.Kelley@nasa.gov

***STENNIS*spacecenter**

Miguel Rodriguez recently joined NASA Stennis Space Center's management team as the director of Center Operations. Growing up in Santurce, Puerto Rico, Miguel knew at age 17 he wanted to work for America's space program. Staying on course to achieve his goal, Rodriguez studied mechanical engineering and graduated from the University of Puerto Rico Engineering College in 1976. Upon graduation, he went to work for NASA at Marshall Space Flight Center as a mechanical design engineer and later transferred to KSC where he held several key positions. To honor his heritage, Rodriguez is active in the Hispanic community, serving as a mentor and frequent speaker. According to Rodriguez, there is no better agency to work for than NASA.

Space Foundation Announces 2003 Space Technology Hall of Fame Inductees

COLORADO SPRINGS, Colo.

The Space Foundation announced on March 3 the selection of the largest group of inductees in the 15-year history of the Space Technology Hall of Fame. This year's Hall of Fame space technologies run the gamut from a medical implant that helps thousands of Americans hear better to a humanitarian device for disarming mine fields.

The six technologies being inducted this year are Cochlear Implant, Digital Latching Valve, Humanitarian Demining Device, Monolithic Microwave Integrated Circuit Technology (MMIC), Virtual Window and VisiScreen (Ocular Screening System). Each brings to Earth a different life-enhancing benefit from space technology.

The addition of these six technologies brings the number of inducted technologies to 44. The Space Foundation will honor the technologies and innovators during the Space Technology Hall of Fame 15th Anniversary Awards Dinner on April 10, attended by nearly 1,100 senior space leaders and guests.

The awards dinner, co-sponsored by Northrop Grumman Space Technology, is the closing ceremony for the 19th National Space Symposium at The Broadmoor Hotel in Colorado Springs, scheduled April 7–10. Dr. Ronald Sugar, Northrop Grumman President and Chief Executive Officer, will be the evening's corporate host with special guest presenters the Honorable Sean O'Keefe, NASA Administrator, and Vice Adm. Richard Truly, USN (Ret.),

director, National Renewable Energy Lab and former NASA Astronaut and Administrator.

The Space Foundation, in cooperation with NASA, established the Space Technology Hall of Fame in 1988 to honor the innovators who have transformed space technology into commercial products, to increase public awareness of the benefits of space spin-off technology and to encourage further innovation.

Widely regarded as the premier conference for space professionals anywhere in the world, the National Space Symposium is the only space-related conference to integrate fully all sectors of space commercial, civil and national security while attracting the most important and influential speakers and the national leadership of the space industry.

The Space Foundation, headquartered in Colorado Springs, is a national non-profit organization whose mission is to vigorously advance and support civil, commercial and national security space endeavors and educational excellence. For a list of individual inductees or for more information about the Space Foundation and the Space Technology Hall of Fame, visit: www.spacefoundation.org



Photo credit: NASA/Doug Stoffer

Above: A new flare for deactivating landmines uses the same NASA rocket fuel that boosts the Space Shuttle into orbit. Excess fuel is being used through an agreement between NASA's Marshall Space Flight Center in Huntsville, Ala., and Thiokol Propulsion in Brigham City, Utah. The new flare destroys landmines without using explosives.



Photo credit: NASA/KSC

Adam Kissiah (right), a retired NASA-KSC engineer, is being inducted into the Space Technology Hall of Fame for the cochlear implant he developed during his employment with NASA. Kissiah received an exceptional category NASA Space Act Award for his 25-year-old technology breakthrough at a technology awards luncheon held at the KSC Visitor Complex Debus Center. At the luncheon, Kissiah posed with Allan Dianic, who is seen holding a photo of Dianic's daughter, a beneficiary of the cochlear implant. Dianic (left) is a software engineer with ENSCO.

NASA's 10th Annual "Moonbuggy Race" Set for April

Hundreds of high school and college students from throughout the United States will meet the challenge to "race like they're on the Moon" in NASA's Great Moonbuggy Race on April 11–12. The race is held annually at the U.S. Space & Rocket Center, in Huntsville, Ala.

The Marshall Space Flight Center sponsors the event as a way to motivate the next generation of engineers and scientists. This will mark the 10th year for student teams to tackle designing, building and racing human-powered vehicles over a lunar-like obstacle course.

High school teams will race Friday, April 11, and college teams will take to the course Saturday, April 12.

The Great Moonbuggy Race is inspired by the development some 30 years ago of the Lunar Roving Vehicle, a program managed by engineers at the Marshall Center. That team's challenge was to design a compact, lightweight all-terrain vehicle that could be transported to the moon in the relatively small

Apollo spacecraft. Astronauts used separate lunar rovers on the final three moon missions, Apollo 15, 16 and 17, to travel 52.51 miles while gathering 620.6 pounds of rock and soil samples for return to Earth.

"It's hard to believe it's been a decade since our first Great Moonbuggy Race — and more than 30 years since our astronauts took their first moonbuggy ride on July 31, 1971," said Durlean Bradford, Moonbuggy Race coordinator in the Education department at the Marshall Center. "We expect a lot of returning schools for this anniversary race — maybe the biggest field of competitors ever. We encourage teams to register early and get started today on their moonbuggy."

In 2002, 33 college teams from 18 states and 27 high school teams representing nine states and Puerto Rico vied for the top three places in each division. A university from Colombia participated as an exhibition team.

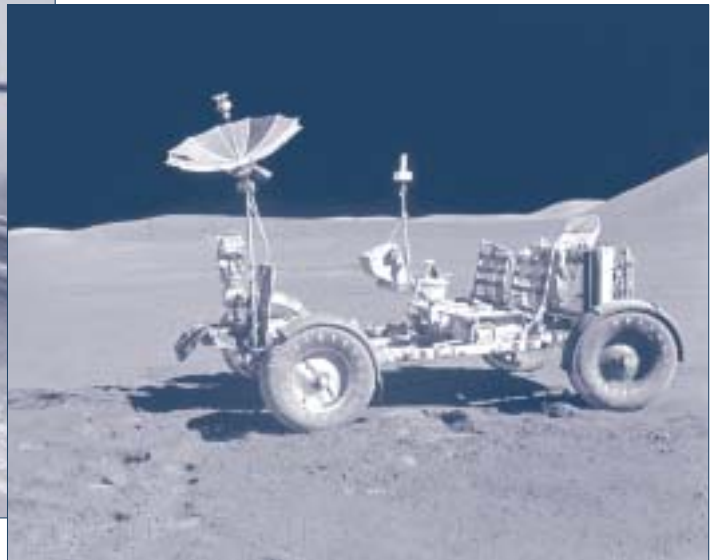
Students face a variety of real-world engineering problems while designing and building their moonbuggies. The challenge continues when a male and a female race each vehicle over a half-mile course of simulated lunar terrain, encountering manmade craters, rocks, ridges and soft soil.

Prizes are awarded not only for the fastest vehicles, but also to the team whose design represents the best technical approach to solve the engineering problem of navigating the simulated lunar surface.

"This is fun, but it's also downright hard work for the teams," Bradford said. "They put in countless hours to come up with their design, figure out what works, build the moonbuggy and then race it. Their math, science, engineering, design and teamwork skills are all put to the test."



A "moonbuggy" from Cornell University in Ithaca, N.Y., wins the college division during the 9th Annual Great Moonbuggy Race in 2002.



NASA's first "moonbuggy," the Lunar Roving Vehicle, shown on the lunar surface during the Apollo 15 mission.

**For more information about the event,
go to moonbuggy.msfc.nasa.gov**

Profile

Steve Isakowitz

Name and title:

Steve Isakowitz, Deputy Chief Financial Officer and Comptroller.

Briefly describe your current position:

I am responsible for providing oversight and financial management of NASA's resources, and ensuring strategic alignment between investments and Agency vision and mission, including all resources aspects of the planning, programming and budgeting process.

Briefly describe your career history:

Last year, I joined NASA as the Deputy Chief Financial Officer for Resources and Comptroller. Prior to NASA, I was the Branch Chief of Science and Space Programs at the Office of Management and Budget (OMB), the lead responsibility within OMB for issues dealing with overall federal investment in research and development, and specific agency responsibilities for NASA and the National Science Foundation. Before joining OMB in 1991, I worked at Martin Marietta in Denver as a project manager and systems engineer for several launch vehicle programs, including the Titan launch system. I also worked at Booz, Allen & Hamilton, and I authored a well-known book for the AIAA on space launch systems. I received both my bachelor's and master's degrees in aeronautics and astronautics from the Massachusetts Institute of Technology.

Briefly describe your career philosophy:

My career philosophy has always been driven by the opportunity to be a member of a team in pursuit of inspiring and monumental achievements. America's space program has provided me such an opportunity. I have always felt that being a member of a



Photo credit: NASA/Bill Ingalls

team means that I don't have to be the person stepping on the moon. Instead, I just need to make sure that I can do my part as a member of the team to make it successful. While I am willing to provide my best at all times, I have strived to balance it with the modern demands of parenting, especially as I am a father of four great young children. Working for the government won't make me rich, but it will enrich the fulfillment I get from doing great things for our nation.

Describe your family and hometown:

I live in Oak Hill, Virginia, with my wife and four young children. I was born in Cleveland, Ohio, and I'm a big fan of the Cleveland Browns.



FIRST Robotics Competition

Team 314 from Carman-Ainsworth High School out of Flint, Mich., watch their robot make its move on the field. This year's game is called "Zone Zeal," in which students must design their robots to race around a playing field gathering balls, put the balls into goals and place the goals in their scoring zone — all in less than two minutes.



NASA Spins Up Vehicle Rollover Test for NHTSA

NASA and the National Highway Transportation Safety Administration (NHTSA) joined forces to put a literal meaning to taking a car out for a spin. NHTSA needed an accurate way to test the rollover limits of passenger vehicles, so it teamed up with NASA, which spun SUVs, minivans and a car in a giant centrifuge to see if they had the right stuff.

Using the Agency's High Capacity Centrifuge facility at the Goddard Space Flight Center, Greenbelt, Md., vehicles were spun on a test platform until they gave up; that is, until their inertia (centrifugal force) caused them to tip over.

Following a widely reported factory recall of Firestone tires, Congress mandated that NHTSA develop a dynamic rollover test for vehicles. Currently, NHTSA employs a rating system called the Static Stability Factor. Experiments used to derive this number involve the placement of a test vehicle on a platform designed to determine the rollover susceptibility of a car or truck. According to NHTSA, a one star rating means a high likelihood of rolling over, and a five star rating means a low likelihood of rolling over.

NHTSA still uses the Static Stability Factor as a test of rollover resistance for passenger vehicles. But critics assert that while laboratory trials like those that derive the Static Stability Factor may provide some useful information, they cannot approach the accuracy or detail of a dynamic test — that is, a test with a vehicle in motion. By leveraging the strengths of both agencies, officials at NASA and NHTSA expect this first-of-its-kind test will enable them to learn valuable safety information about vehicles that continue to move millions of Americans every day.

"The NASA project gives us a chance to really explore a centrifuge factor and see if we can use it in lieu of a static stability factor," said Stephen Kratzke, associate administrator for rule-making, NHTSA. "Theoretically, it's a much improved test."

NASA uses its High Capacity Centrifuge to test spacecraft before they're sent into space. By spinning flight hardware at high speeds, engineers can subject it to many times the force of Earth's gravity — forces that approximate effects similar to what satellites will undergo during the rigors of a rocket launch. By testing hardware on a centrifuge, project managers and engineers can both validate a satellite's structural integrity prior to lift-off, as well as help refine potential problems.

A crash test dummy went along for the ride. Sitting in the driver's seat, a person becomes part of the physical environment that makes up the test; without the shape and weight of a person, the test cannot be run as accurately as it otherwise might.

Since its inception, NASA has pursued a commitment to technology transfer, providing its technology, facilities and expertise to be used in developing new products and processes that benefit the United States. For every space technology developed, NASA strives to identify new ways it can be used. NASA then makes these technologies, as well as its facilities and expertise, available to U.S. companies, universities and government agencies.

Texas Residents Provide Warm Hospitality

They say everything is bigger in Texas, and, true to form, Texans turned out in a big way to support Columbia debris recovery efforts in the northeastern part of the state.

"The outpouring was amazing," said Headquarters Public Affairs Officer Dave Steitz, who was deployed to the Lufkin, Texas area shortly after the shuttle accident.

Lufkin emerged as the center of what would turn out to be a massive inter-agency effort to find, identify and collect debris from the fallen orbiter.

The people of Lufkin, a town of only about 38,000, welcomed thousands of searchers to the area with trademark Southern hospitality.

"I don't think I've ever eaten so well in my life," Steitz said. "People brought homemade pies, cakes and the best lemon cookies I've ever had to the Lufkin command center and even to the field camps. For more than a month, a local McDonald's restaurant fed everyone at the command center — for free!"



Administrator O'Keefe and several NASA officials traveled to the Columbia recovery sites in Texas last month. They toured the Command Center, Toledo Bend Dive site, Lufkin Emergency Operations Center and the Nacogdoches base camp, as well as visited with the hundreds of volunteers and recovery workers. Administrator O'Keefe and guests repeatedly thanked the workers and volunteers for their tireless efforts and dedication to the debris recovery.

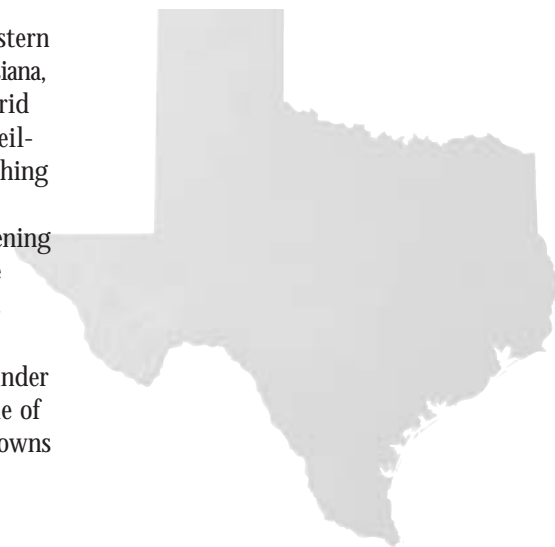
Local volunteers from the Red Cross and the Salvation Army ensured that NASA personnel and recovery workers had everything from free back massages to a hot cup of coffee in the morning.

To date, just over one-fifth of Columbia has been recovered, so search crews still have weeks of work ahead of them. They're scouring the forests and lakes of northeastern Texas and northwestern Louisiana, using methodical ground grid searches, high-tech air surveillance capabilities and everything in between. Time is of the essence; spring brings thickening forests, which will make the search much more difficult.

Back at NASA Headquarters, an effort is under way to make sure the people of Lufkin — and the nearby towns of Corsicana, Palestine,

Nacogdoches and Hemphill — are properly recognized and thanked for their invaluable contributions to the recovery effort.

"The people of East Texas have opened their homes and hearts," Steitz said. "They'll be part of the NASA family for years to come."



NASA Releases SRTM Images

The first release of data from the Shuttle Radar Topography Mission (SRTM) shows the North American continent in grand scale and reveals the existence of a 112-mile-wide impact crater in the Yucatan that dates back some 65 million years.

Many scientists see the crater, known as Chicxulub, suspected to exist since 1980, as the “smoking gun” responsible for the demise of the dinosaurs and more than 70 percent of the Earth’s living species at the time.

The SRTM, flown aboard the Space Shuttle Endeavour during its mission in February 2000, made 3-D measurements of the more than 80 percent of Earth’s landmass. SRTM is a cooperative project of NASA, the National Imagery and Mapping Agency (NIMA) of the U.S. Department of Defense, and the German and Italian space agencies.

“There are spectacular features that pop out at you in these maps as never before, and more subtle features, like Chicxulub, that now become apparent for the first time,” said Dr. Michael Kobrick, SRTM project scientist at NASA Jet Propulsion



This image of North America was generated with data from the Shuttle Radar Topography Mission. Additional images are available at www.photojournal.jpl.nasa.gov

Laboratory, Pasadena, Calif. For example, he explained that on the surface the Yucatan crater is so subtle that if you walked across it you probably wouldn’t notice it. “That’s where the view from space becomes invaluable,” he said.

For more information, visit: www.jpl.nasa.gov/srtm

National Women’s History Month



NASA Headquarters hosted an event in celebration of National Women’s History Month on March 19 in the auditorium. Dr. Dorothy Height, Chair and President Emerita of the National Council of Negro Women, spoke about “Women Pioneering the Future.”

Dr. Height, employed by both government and social service associations, is known primarily by her leadership role with the YWCA and the National Council of Negro Women (NCNW).

In 1957, Dorothy Height assumed the presidency of the NCNW, until January 1998. In 1965, Dorothy Height inaugurated and became Director of the Center for Racial Justice, a position she held until 1977, when she retired from the National YWCA of the USA.

Her distinguished service and contributions to making the world a more just and humane one have earned her over 50 awards and honors from local state and national organizations, and the federal government.

For additional information, contact Dollie McCown, 202.358.1098.

Photo credit: NASA/Renee Bouchard

F2M Unveils FY03 Legislative Victories

When the NASA Freedom to Manage (F2M) effort swung into gear 14 months ago, the F2M Task Force had one objective in mind: to identify and remove impediments to effective management. It didn't matter whether the identified impediment required internal changes, negotiations with external agencies or legislative change. F2M was willing to take it on!

One of the first major actions taken by the Task Force was to solicit inputs from across NASA on potential barriers and topics that the team should address. Several suggestions submitted required legislative change. Consequently, the F2M team helped introduce legislative proposals into the FY03 process that resulted in five legislative enactments that resolve several F2M impediments. The following summarizes the five provisions.

The F2M team helped introduce legislative proposals into the FY03 process that resulted in five legislative enactments that resolve several F2M impediments.

1. *Employment Flexibility Provisions*

The Homeland Security Act of 2002 provides two flexibilities that promise to speed the hiring process and facilitate the selection of the best candidates.

- The first allows for a simplified process to be used in the rating and ranking part of the hiring cycle, using broad categories of ratings (e.g., "Highly Qualified") instead of strict numerical ratings. Selecting officials will be able to pick from anyone in the highest category instead of being limited to selecting in numerical order.
- The second provision in the Act allows the use of a streamlined hiring process, known as direct-hire authority, when a severe shortage of candidates exists, or under other critical circumstances.

2. *Voluntary Separation Incentives and Early Retirement Authority*

The Homeland Security Act of 2002 also provides permanent authority to agencies to offer voluntary separation incentives (buyouts) to employees without the restrictions that limited their use in the past. The Act also expands the authority for use of early retirements to restructure and reshape the workforce. The use of these authorities will allow agencies to meet their emerging workforce needs without having to resort to undesirable alternatives such as reduction in force.

3. *Enhanced Use Leasing*

The FY 2003 Omnibus Appropriations Act includes NASA Enhanced Use Leasing (EUL) authority that allows the Agency to undertake demonstration projects at two Centers, under which they may:

- Retain all revenue from outleases to deposit the revenue into a capital asset account where the funds do not expire and to use the revenue for real property maintenance, repair, revitalization or improvements. Currently, NASA must forward any outlease revenue that is above NASA's costs to the general treasury.
- Accept "services-in-kind" in lieu of cash for an outlease, including the maintenance, construction, modification or improvement of real property, as well as other services. Currently, NASA does not have the authority to accept "services-in-kind" for real property outleases.

NASA must submit a plan to Congress for implementing the demonstration projects before entering into the first EUL lease. HQ Code JX is the lead for developing the plan, developing a process to select the two Centers and providing direction and oversight for EUL agreements.

4. *Working Capital Fund*

The FY 2003 Omnibus Appropriations Act also authorizes NASA to implement a Working Capital Fund (WCF) beginning in FY 2004. The purpose of a WCF is to promote economy, efficiency and accountability for selected administrative and reimbursable activities (e.g., telecommunications, travel, payroll/personnel, voucher payments, and printing.)

A key benefit of a WCF is that funds are available without regard to fiscal-year limitation. Implementing a WCF would complement NASA's ongoing full-cost initiative.

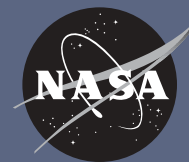
NASA Enterprises and Centers will be canvassed for suggestions that should be incorporated into the WCF.

5. *Removal of Legislative Restriction on Travel Funding*

The FY 2003 Omnibus Appropriations Act has eliminated the previously included General Provision that limited appropriations for travel to the amounts included in the Agency's annual budget request. This allows for the potential reprogramming of other existing funds into travel funds, with congressional approval needed if more than \$500K is needed.

These provisions are far reaching. And we are proud that F2M made a difference. However, keep in mind that we have more proposals that will be introduced in the FY04 and FY05 process. We are listening, and we will continue to act on your suggestions.

freedom²manage
Working to be efficient, effective, and accountable



NASA Vision
April 2003

Adventures with the ISS Science Officer

Astronaut Donald R. Pettit is NASA's Science Officer aboard the International Space Station (ISS) during Expedition Six. Like most of us, this NASA Science Officer looks forward to Saturday mornings.

"Saturday is when we have a bit of free time," said Pettit. "While some of the crew read books, play musical instruments or watch movies, I prefer to do 'Saturday Morning Science,' fun experiments of my own design."

One recent Saturday, working in the Destiny laboratory 200 miles above Earth, Pettit prepared a solution of water, soap and glycerin, and fashioned a bubble-wand from thin wire. "I wanted to see what thin films and bubbles might do in zero-g and felt it was a topic ripe for discovery," he said.

Next, Pettit injected some tiny mica flakes into the film, allowing him to observe otherwise-hidden flows and swirls. "Then I blew on the film," Pettit said, and fascinating patterns emerged. "These tracer particle patterns lasted for well over four hours."

These films highlight the value of space for fundamental research in fluid physics. Gravity-driven convection and three-dimensional motions complicate fluid flow on Earth. A two-dimensional film of weightless water is a splendid research tool that could yield valuable data for many industries on Earth. Information about scientific research aboard the International Space Station is available at: scipoc.msfc.nasa.gov



Astronaut Donald R. Pettit, Expedition Six NASA ISS Science Officer, performs in-flight maintenance (IFM) in the Destiny laboratory on the International Space Station (ISS).



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